

Exhibit A

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

INNOVATIVE DISPLAY
TECHNOLOGIES, LLC,

Plaintiff,

v.

ACER INC., ET AL.

Defendants.

CIVIL ACTION NO. 2:13-CV-00522-JRG
LEAD CASE¹

JURY TRIAL DEMANDED

DEFENDANTS' INVALIDITY CONTENTIONS

Pursuant to Patent Local Rules ("P.R.") 3-3 and 3-4, and the Court's Docket Control Order of January 23, 2014 (Docket No. 37) ("Court's Order"), defendants Acer Inc., Acer America Corporation, Dell Inc., Hewlett-Packard Company, Huawei Investment and Holding Co., Ltd., Huawei Technologies Co., Ltd., Huawei Device USA Inc., BlackBerry Corporation, BlackBerry Limited, and Microsoft Corporation (collectively, "Defendants"), hereby serve these Invalidity Contentions and accompanying document production on Plaintiff Innovative Display Technologies, LLC ("Plaintiff").

I. Introduction

Plaintiff has asserted each of the following claims against at least one of the Defendants:

- claims 1, 2, and 4 of U.S. Patent No. 6,755,547 ("the '547 patent");
- claims 1, 4-6, 16, 22, 23, 27, 28, and 31 of U.S. Patent No. 7,300,194 ("the '194 patent");

¹ The following cases have been consolidated for pre-trial purposes: Case Nos. 2:13-cv-00522-JRG, 2:13-cv-00523-RSP, 2:13-cv-00524-JRG, 2:13-cv-00525-JRG, 2:13-cv-00526-JRG, and 2:13-cv-00783-JRG.

- claims 1, 6, 7, 9, 10, 13-15, and 19 of U.S. Patent No. 7,384,177 (“the ‘177 patent”);
- claims 1, 3, 10, 16, 17, 25, 33, and 34 of U.S. Patent No. 7,404,660 (“the ‘660 patent”);
- claims 1, 3-5, 7-9, and 13 of U.S. Patent No. 7,434,974 (“the ‘974 patent”);
- claims 1, 4, 8, 13, 29, and 47 of U.S. Patent No. 7,537,370 (“the ‘370 patent”); and
- claims 1, 3, and 4 of U.S. Patent No. 8,215,816 (“the ‘816 patent”) (collectively, the ‘547 patent, the ‘194 patent, the ‘177 patent, the ‘660 patent, the ‘974 patent, the ‘370 patent, and the ‘816 patent will be referred to as the “Patents-in-Suit”).

See Plaintiff's Disclosure of Asserted Claims and Infringement Contentions and Accompanying Document Production, served separately on respective Defendants on December 20, 2013 (“Infringement Contentions”). The Court has not construed any of the terms in the Patents-In-Suit. Accordingly, Defendants' Invalidity Contentions are based on Defendants' present understanding of the asserted claims and Plaintiff's apparent construction of the claims in its Infringement Contentions. Defendants' Invalidity Contentions, including the attached invalidity claim charts, may reflect alternative positions dependent upon claim construction and scope. These Invalidity Contentions are not an admission by Defendants that the accused products, including any current or past versions of these products or Defendants' technology, are covered by or infringe the asserted claims. Further, by including prior art that anticipates or renders obvious claims based on Plaintiff's claim construction or any other claim construction, Defendants are not adopting Plaintiff's claim construction or any other claim construction. Defendants' Invalidity Contentions are made in a variety of alternatives and do not represent Defendants' agreement with Plaintiff's apparent applications or view as to the meaning, definiteness, written description support for, or enablement of any claim contained therein.

Consistent with P.R. 3-6 and the Court's Order, Defendants reserve the right to amend these disclosures and associated document production, should Plaintiff provide any information that it failed to provide in its P.R. 3-1 and 3-2 disclosures, should Plaintiff amend its disclosures in any way, should the Court's claim construction order make amendment necessary, or should additional prior art come to light. To the extent that Plaintiff's Patent Local Rule 3-1 disclosures lack the specificity required under the Local Rules to inform Defendants of the specifics of certain aspects of Plaintiff's infringement positions, Defendants provide these Invalidity Contentions consistent with the case schedule currently in place but do so without waiving any right to receive from Plaintiff such full and complete specific infringement disclosures as should have been provided from the outset. Defendants' compliance with the current schedule should not be viewed as waiver of any rights in regard to Plaintiff's Patent Local Rule 3-1 disclosures. Furthermore, if Plaintiff revises its Infringement Contentions to address any deficiencies that may be identified by Defendants, Defendants reserve the right to amend these Invalidity Contentions.

Moreover, Defendants reserve the right to revise their ultimate contentions concerning the invalidity of the asserted claims, which may change depending upon the Court's construction of the asserted claims, any findings as to the priority date of the asserted claims, and/or positions that Plaintiff may take concerning claim construction, infringement, and/or invalidity issues. Defendants hereby provide disclosures and related documents pertaining only to the asserted claims as identified by Plaintiff in its Infringement Contentions.

Defendants reserve the right to rely on discovery and papers and evidence filed, served, or submitted by Plaintiff in connection with this litigation.

Prior art not included in this disclosure, whether known or not known to Defendants, may become relevant. In particular, Defendants are currently unaware of the extent, if any, to which Plaintiff may contend that limitations of the Patents-In-Suit are not disclosed in the prior art identified by Defendants. To the extent that such an issue arises, Defendants

reserve the right to identify other references that would explain or render obvious the allegedly missing limitation(s). Further, because discovery has begun only recently and because Defendants have not yet completed their search for and analysis of relevant prior art, Defendants reserve the right to revise, amend, and/or supplement the information provided herein, including identifying, charting, and relying on additional references, should Defendants' further search and analysis yield additional information or references.

Additionally, Defendants reserve the right to present additional prior art or evidence of prior art located during the course of third-party discovery or further investigation and to amend or supplement their Invalidity Contentions to the extent that such discovery or investigation yields information forming the basis for such contentions.

These Invalidity Contentions are limited to Defendants' current positions regarding the grounds of invalidity specifically called for in P.R. 3-3. Defendants do not believe that they are required to include herein any explanation or contentions regarding any other defense that Defendants may wish to assert in this action. Defendants reserve the right to assert and pursue all other defenses that may be available, including all of the affirmative defenses pled in any of Defendants' answers, or any other grounds.

In addition to the prior art identified below and the accompanying invalidity claim charts, Defendants also reserve the right to incorporate by reference any of the additional prior art and invalidity claim charts that have been or will be disclosed by any of the Defendants in any action related to one or more of the Patents-in-Suit, including but not limited to the following actions pending in the U.S. District Court for the District of Delaware: *Delaware Display Group LLC et al. v. Amazon.com Inc.* (Case No. 1:13-cv-02106-RGA), *Delaware Display Group LLC et al. v. HTC Corporation et al.* (Case No. 1:13-cv-02107-RGA), *Delaware Display Group LLC et al. v. Lenovo Group Ltd. et al.* (Case No. 1:13-cv-02108-RGA), *Delaware Display Group LLC et al. v. LG Electronics Inc. et al.* (Case No. 1:13-cv-02109-RGA), *Delaware Display Group LLC et al. v. Pantech Co. Ltd. et al.* (Case No. 1:13-cv-02110-RGA), *Delaware Display Group LLC et al. v. Sony*

Corporation et al. (Case No. 1:13-cv-02111-RGA), and *Delaware Display Group LLC et al. v. VIZIO Inc. et al.* (Case No. 1:13-cv-02112-RGA). Defendants' reservation of rights to incorporate additional prior art and invalidity claim charts described above also includes the following cases pending in this District: *Innovative Display Technologies LLC v. ZTE Corporation et al.* (Case No. 2:13-cv-00527-JRG), *Innovative Display Technologies LLC v. Nokia Corporation et al.* (Case No. 2:13-cv-784-JRG), and *Innovative Display Technologies LLC v. Apple Inc.* (Case No. 2:14-cv-00030-JRG). Defendants' reservation of rights to incorporate additional prior art and invalidity claim charts includes but is not limited to claim charts based on materials obtained in response to subpoena requests. Finally, each Defendant hereby expressly reserves the right to incorporate any references or invalidity contentions produced individually by any one of the Defendants as if such contentions or references were produced explicitly herein.

II. P.R. 3-3(a): Identification of Prior Art

Pursuant to P.R. 3-3(a) and the Court's Order, Defendants identify the following prior art that anticipates one or more asserted claims of the Patents-In-Suit and/or renders one or more claims obvious. Each prior art patent is identified by its country of origin, number, and date of issue. Additionally, the first named inventor is identified for each prior art patent. To the extent that further information is needed to qualify a prior art patent as 35 U.S.C. § 102(b) prior art under P.R. 3-3(a) and the Court's Order, the patent was published by the U.S. Patent and Trademark Office on its issue date, or the patent application was published at some other date pursuant to 35 U.S.C. § 122. Each prior art publication is identified by its title, author, publisher (where feasible), and date of publication. The date of each prior art patent or publication qualifies it as prior art under 35 U.S.C. §§ 102 and/or 103. The alignment of these contentions with particular sections of 35 U.S.C. §§ 102 and/or 103 is based upon currently available information and subject to revision as further information becomes available in discovery. For example, Defendants contend that the references identified below qualify as prior art under 35 U.S.C. § 102(a), § 102(e), §

102(g)(2) and/or § 103, to the extent that they do not qualify as prior art under 35 U.S.C. § 102(b). For all of the reasons stated in Section I, *supra*, Defendants reserve the right to supplement this identification as appropriate. Further, in addition to the references identified below, Defendants direct Plaintiff to the art produced contemporaneously with these contentions at JD0000001-8016.

A. Prior Art Patents, Published Applications, and Literature to the Asserted Claims of the Patents-in-Suit

1. U.S. Patent No. 4,729,068 to Ohe, filed October 10, 1986 and issued March 1, 1988
2. U.S. Patent No. 5,029,045 to Sanai et al., filed August 4, 1989 and issued July 2, 1991
3. U.S. Patent No. 5,207,493 to Murase et al., filed July 3, 1991 and issued May 4, 1993
4. U.S. Patent No. 5,359,691 to Tai et al., filed April 19, 1993 and issued October 25, 1994
5. U.S. Patent No. 5,365,411 to Rycroft et al., filed January 6, 1993 and issued November 15, 1994
6. U.S. Patent No. 5,386,347 to Matsumoto, filed July 7, 1994 (claiming priority to an application filed November 9, 1992) and issued January 31, 1995
7. U.S. Patent No. 5,390,436 to Ashall, filed September 20, 1991, and issued February 21, 1995
8. U.S. Patent No. 5,408,388 to Kobayashi et al., filed January 22, 1993 and issued April 18, 1995
9. U.S. Patent No. 5,453,855 to Nakamura et al., filed December 9, 1993 and issued September 26, 1995
10. U.S. Patent No. 5,457,615 to Nezer, filed August 17, 1993 and issued October 10, 1995

11. U.S. Patent No. 5,461,547 to Ciupke et al., filed July 20, 1993 and issued October 24, 1995
12. U.S. Patent No. 5,497,293 to Noguchi et al., filed April 22, 1994 and issued March 5, 1996
13. U.S. Patent No. 5,504,605 to Sakuma et al., filed May 27, 1994 and issued April 2, 1996
14. U.S. Patent No. 5,523,930 to Fritts, filed May 12, 1993 (claiming priority to an application filed on August 24, 1990) and issued June 4, 1996
15. U.S. Patent No. 5,582,480 to Bracht et al., filed May 19, 1995 and issued December 10, 1996
16. U.S. Patent No. 5,655,827 to Kaneko et al., filed March 2, 1995 (claiming priority to an application filed July 8, 1992) and issued August 12, 1997
17. U.S. Patent No. 5,619,351 to Funamoto et al., filed July 13, 1993 and issued April 8, 1997
18. U.S. Patent No. 5,640,216 to Hasagawa et al., filed April 7, 1995 and issued June 17, 1997
19. U.S. Patent No. 5,711,589 to Oe et al., filed April 10, 1996 (claiming priority to an application filed June 22, 1993) and issued January 27, 1998
20. U.S. Patent No. 5,735,590 to Kashima et al., filed March 1, 1995 and issued April 7 1998
21. U.S. Patent No. 6,108,060 to Funamoto et al., filed May 28, 1999 (claiming priority to May 10, 1994) and issued August 22, 2000
22. European Patent Application No. EP 0 495 273 A1, Pritash, published July 22, 1992
23. European Patent Application No. EP 0 500 960 A1, Ohe, published September 2, 1992
24. European Patent Application No. EP 0 571 173 A2, Hooker, published November 24, 1993

25. European Patent Application No. EP 0 650 010 A1, Kojima, published April 26, 1995
26. World Intellectual Property Organization Publication No. WO 90/07173 to Conti, published June 28, 1990
27. World International Property Organization Publication No. WO 95/10066, Gleckman, published April 13, 1995
28. Japanese Unexamined Patent Application Publication JP H5-210014, Tsunoda, published August 20, 1993
29. Japanese Unexamined Patent Application Publication JP H6-3526, Nagatani et al., published January 14, 1994
30. Japanese Unexamined Patent Application Publication JP H6-235917, Yamada et al., published August 23, 1994
31. Japanese Unexamined Patent Application Publication JP H6-242441, Mochizuki, published September 2, 1994
32. Japanese Unexamined Patent Application Publication JP H6-281934, Kashima et al., published October 7, 1994
33. Japanese Unexamined Patent Application Publication JP H07-056022, Goto et al., published March 3, 1995
34. Japanese Unexamined Patent Application Publication H7-21817, Ishiwatari et al., published January 24, 1995
35. Japanese Unexamined Patent Application Publication H08-152527, Matsumoto, published June 11, 1996
36. *Super Thin Backlight for Liquid Crystal Displays*, Satoshi Honda, Sanken Technical Report Vol. 25, No. 1 (1993)
37. 3M product brochure 75-0500-0403-7, "Brightness Enhancement Film (BEF)," and associated presentation, 12 pages (1993)

38. 3M product brochure 75-0500-0563-8, "Light Diffusing Film," and associated presentation, 8 pages (1993)
39. U.S. Patent No. 5,775,791 to Yoshikawa et al., filed September 1, 1993 and issued July 7, 1998
40. U.S. Patent No. 5,598,280 to Nishio et al., filed March 22, 1994 and issued January 28, 1997
41. U.S. Patent No. 5,982,540 to Koike et al., filed March 13, 1995 and issued November 9, 1999
42. Japanese Unexamined Patent Application Publication JP H3-190004A, Fujimori, published August 20, 1991
43. Japanese Unexamined Patent Application Publication JP H05-210014A, Tsunoda, published August 20, 1993
44. Japanese Unexamined Patent Application Publication JP H6-174937A, Wakizaka, published June 24, 1994
45. Japanese Unexamined Patent Application Publication JP H6-230378A, Etsuo et al., published August 19, 1994
46. Japanese Patent Publication JP H7-005462B, Toshikazu, published January 10, 1995
47. Japanese Unexamined Patent Application Publication JP H7-064078A, Etsuo et al., published May 10, 1995

B. Prior Art Offers for Sale and Public Uses to the Asserted Claims of the Patents-in-Suit

Defendants believe that there may be offers for sale and public uses of products that qualify as prior art under 35 U.S.C. § 102(b), including but not limited to the technology described in the prior art patents and publications identified in Section II(A), *supra*. Details regarding such offers for sale and public uses would be within the possession of third parties, including but not limited to 3M and its customers, from whom Defendants have not

yet received discovery. Defendants reserve the right to present additional prior art or evidence of prior art located, and to amend or supplement their Invalidity Contentions, to the extent that such discovery or investigation yields information forming the basis for such contentions.

III. P.R. 3-3(c): Claim Charts

Pursuant to P.R. 3-3(c) and the Court's Order, the claim charts contained in Exhibit A identify specifically where, in each of the cited patents, publications, and systems ("references"), each element of each asserted claim of the '547 patent is disclosed. The claim charts contained in Exhibit B identify specifically where, in each of the references each element of each asserted claim of the '194 patent is disclosed. The claim charts contained in Exhibit C identify specifically where, in each of the references each element of each asserted claim of the '177 patent is disclosed. The claim charts contained in Exhibit D identify specifically where, in each of the references each element of each asserted claim of the '660 patent is disclosed. The claim charts contained in Exhibit E identify specifically where, in each of the references each element of each asserted claim of the '974 patent is disclosed. The claim charts contained in Exhibit F identify specifically where, in each of the references each element of each asserted claim of the '370 patent is disclosed. The claim charts contained in Exhibit G identify specifically where, in each of the references each element of each asserted claim of the '816 patent is disclosed.

In some cases, similar or identical claim elements appear in more than one of the Patents-in-Suit. By way of example only, each of claim 4 of the '194 patent and claim 6 of the '177 patent has "at least two light sources" as a claim element. Where similar or identical claim elements appear in the asserted claims of more than one of the Patents-in-Suit, the identification of that claim element in a reference in connection with a particular asserted claim should be understood to be an identification of that claim element in the asserted claims of other Patents-in-Suit, unless stated otherwise.

Defendants have endeavored to identify exemplary portions of the references. The references, however, may contain additional support for the claim limitations for which Defendants cite them or for other limitations of the asserted claims. Defendants reserve the right to rely on any and all portions of the references, other documents, and expert testimony to provide context or to aid in understanding the cited portions of the references. Where Defendants cite to a particular figure in a reference, the citation should be understood to encompass the caption and description of the figure and any text relating to the figure. Conversely, where Defendants cite to particular text referring to a figure, the citation should be understood to include the figure as well.

IV. P.R. 3-3(b): Anticipation

Pursuant to P.R. 3-3(b) and the Court's Order, Defendants identify the following prior art now known to Defendants to anticipate the asserted claims of the Patents-In-Suit, either expressly or inherently as understood by a person having ordinary skill in the art. In some instances, Defendants contend that certain prior art is anticipatory where certain elements are inherently present based on Plaintiff's apparent claim constructions in its Infringement Contentions. Anticipatory references are listed by the number used to identify the reference in Section II, *supra*. Pursuant to P.R. 3-3(c), the claim charts contained in Exhibits A-G identify specifically where, in each of the cited references, each element of each asserted claim is found.

'547 Patent Asserted Claim	Anticipatory References
1	1, 6, 7, 16, 17, 21, 27, 33, 40
2	1, 6, 7, 16, 17, 21, 27, 33, 40
4	1, 6, 7, 16, 17, 21, 27, 33, 40

‘194 Patent Asserted Claim	Anticipatory References
1	6, 17, 18, 21, 27, 31, 33, 37, 40, 41, 46
4	17, 21, 27, 31
5	17, 21, 27
6	17, 21, 27
16	6, 17, 18, 21, 27, 33, 40, 46
22	6, 17, 18, 21, 27, 46
23	6, 17, 18, 21, 27, 31, 33, 40
27	6, 17, 18, 21, 27, 40
28	6, 17, 18, 21, 27, 31, 33, 37, 40, 46
31	6, 17, 18, 21, 27, 33, 40, 46

‘177 Patent Asserted Claim	Anticipatory References
1	5, 9, 17, 21, 25, 26, 33, 34, 45
6	5, 9, 17, 21, 25, 34, 45
7	5, 9, 17, 21, 25, 26, 34, 45
9	5, 9, 17, 21, 25, 26, 34, 45
10	5, 9, 17, 21, 25, 26, 34, 45
13	5, 9, 17, 21, 25, 26, 34, 45
14	5, 9, 17, 21, 25, 26, 33
15	5, 9, 17, 21, 25, 34, 45
19	5, 9, 45

'660 Patent Asserted Claim	Anticipatory References
1	2, 4, 6, 9, 11, 16, 17, 19, 21, 27, 36, 45, 47
3	2, 4, 6, 9, 11, 16, 17, 19, 21, 27, 36, 45, 47
10	2, 4, 6, 9, 11, 16, 17, 19, 21, 27, 36, 45, 47
16	2, 4, 9, 11, 16, 17, 19, 21, 27, 36, 45, 47
17	9, 27, 36, 45, 47
25	2, 6, 9, 17, 21, 45, 47
33	2, 4, 9, 11, 16, 20, 27, 36, 45, 47
34	2, 4, 9, 11, 16, 20, 27, 36, 45, 47

'974 Patent Asserted Claim	Anticipatory References
1	9, 12
3	9, 12
4	9, 12
5	9, 12
7	9, 12
8	9, 12
9	9, 12
13	9, 12

'370 Patent Asserted Claim	Anticipatory References
1	6, 8, 17, 21, 23, 24, 28, 29, 30, 42, 43
4	6, 8, 17, 21, 23, 24, 28, 29, 30, 42, 43
8	6, 8, 23, 24, 28, 29, 43
13	6, 8, 17, 21, 23, 24, 28, 29, 30, 42

'370 Patent Asserted Claim	Anticipatory References
29	6, 8, 17, 21, 23, 24, 28, 29, 30, 42, 43
47	6, 8, 17, 21, 23, 24, 28, 29, 30, 42

'816 Patent Asserted Claim	Anticipatory References
1	3, 9, 17, 21, 34, 44
3	3, 9, 17, 21, 34
4	9

V. P.R. 3-3(b): Obviousness

The United States Supreme Court has clarified the standard for what types of inventions are patentable. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398 (2007). In particular, the Supreme Court emphasized that inventions arising from ordinary innovation, ordinary skill, or common sense should not be patentable. In that regard, a patent claim may be obvious if the combination of elements was obvious to try or there existed at the time of the invention a known problem for which there was an obvious solution encompassed by the patent's claims. In addition, when a reference is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one. If a person of ordinary skill can implement a predictable variation, § 103 likely bars its patentability.

Each of the prior art references identified as anticipatory references in Section IV, *supra*, also, in the alternative, under the doctrine of single reference obviousness renders obvious each asserted claim for which it is listed in the tables above when it is combined with information known to one of ordinary skill in the art at the time of the alleged invention. One of ordinary skill in the art would have been motivated to modify each of the

anticipatory references to make obvious the limitations of each asserted claim for which it was cited above.

Fundamentally, the asserted claims of the Patents-in-Suit were obvious at the time of their effective filing date because there were a variety of backlit optical illumination panel assemblies that used light guides as light emitting panel members and various forms of diffuser and brightness enhancement films to scatter light in the manner described by the asserted claims. It would have been obvious to one skilled in the art at the time of the invention to arrange the panel member and the associated optical films to operate in the manner described in the asserted claims. In fact, each element of each asserted claim is disclosed in numerous instances in the prior art.

A. Motivations to Combine References

A person of ordinary skill in the art would have been motivated to combine the references identified in the charts attached as Exhibits A-G for numerous reasons at the relevant time. In general, the reason, motivation or suggestion to modify or combine the references in the manner claimed can be found in the explicit and/or implicit teachings and the prior art as a whole, the general knowledge of those skilled in the art, including knowledge of trends in the field and knowledge that the art is of special interest or importance in the field, and from the fact that the references are in the same field of endeavor and/or seek to solve a common problem.

For example, in the fields of optics, optical films, light guides, and display technologies, persons of ordinary skill in the art constantly seek better methods to transfer viewable light more efficiently from a light source to the intended viewer of the light. Therefore, if two prior art references, for example, relate to methods for improving light transmission through a liquid crystal display, one of ordinary skill in the art would be motivated to combine those references to achieve higher light transfer efficiency for benefits including reduced power consumption and brighter screen illumination. This motivation is expressly stated in several of the prior art references, including, as one example, Reference

38. Further, all prior art references – as well as the Patents-in-Suit – were part of the same fields of optics, optical films, light guides, and display technology. A person having ordinary skill in any or all of these fields would be aware of all prior art in those fields, including but not limited to the identified prior art references and systems, and would have been motivated to combine the teachings of prior art with the field.

In addition, a person having ordinary skill in the art would have been motivated to combine any of the references identified herein, because, as specifically disclosed in the attached charts in Exhibits A-G, all of the claim elements were identified, predictable solutions and techniques frequently applied in the field of display technology, including but not limited to: employing a light source and a light guide having certain optical properties to output a desired light output distribution.

As another example, persons of ordinary skill in the fields of optics, optical films, light guides, and display technologies seek ways to improve the uniformity of the light output to the user across lighting technologies including displays, light guides, and films. Therefore, one of ordinary skill in the art would be motivated to combine multiple prior art references relating to improving the transfer of light from a light source to the intended viewer, including for example combining references to improve the uniformity of the illumination across different parts of a display. Further, all prior art references – as well as the Patents-in-Suit – were part of the same fields of optics, optical films, light guides, and display technology. A person having ordinary skill in any or all of these fields would be aware of all prior art in those fields, including but not limited to the identified prior art references and systems, and would have been motivated to combine the teachings of prior art within the field.

Defendants reserve the right to further specify the motivations to combine the prior art in response to positions that Plaintiff may take later in this case and as discovery, including third party discovery, proceeds. Defendants may rely on any and all portions of the prior art, other documents, and expert testimony to establish that a person of ordinary

skill in the art would have been motivated to modify or combine the prior art so as to render the claims invalid as obvious.

B. Combinations of Prior Art

Pursuant to P.R. 3-3(b) and the Court's Order, Defendants identify the following prior art references now known to Defendants that either alone or in combination with other prior art render the asserted claims of the Patents-In-Suit invalid as obvious under 35 U.S.C. § 103. References are listed by the number used to identify the reference in Section II, *supra*. In certain instances, the identified obviousness combinations are provided in the alternative to Defendants' anticipation contentions and are not to be construed to suggest that any reference included in the combinations is not by itself anticipatory. These prior art combinations are not exhaustive; rather, they are illustrative examples of the prior art combinations disclosed generally above. Many more combinations are possible.

To the extent that Plaintiff contends that any of the above-identified anticipatory prior art fails to disclose one or more limitations of the asserted claims of the Patents-In-Suit, Defendants reserve the right to identify other prior art references that would render the claims obvious despite the allegedly missing limitation.

In addition, Defendants incorporate by reference each and every prior art reference of record in the prosecution of the Patents-in-Suit including all patents related to the Patents-in-Suit, as well as the prior art discussed in the specifications of the Patents-in-Suit. Each prior art reference disclosed in Section II, *supra*, either alone under the doctrine of single reference obviousness or in combination with other prior art, also renders the asserted claims of the Patents-in-Suit invalid as obvious. In addition, each anticipatory prior art reference and/or each additional prior art reference may be combined with: (1) information known to persons skilled in the art at the time of the alleged invention; (2) any of the anticipatory prior art references; and/or (3) any of the additional prior art references identified above in this section to render these claims invalid as obvious.

The following prior art references render the asserted claims of the Patents-in-Suit invalid as obvious under 35 U.S.C. § 103 when combined with other prior art references as specifically identified in the claim charts contained in Exhibits A-G:

'547 Patent Asserted Claim	Obviousness References
1	35, 37
2	35, 37
4	35, 37

'194 Patent Asserted Claim	Obviousness References
4	6, 18, 31, 33, 37, 40, 41, 46
5	6, 18, 31, 33, 37, 40, 41, 46
6	6, 18, 31, 33, 37, 40, 41, 46
16	31, 37, 41
22	31, 33, 37, 40, 41
23	37, 41, 46
27	31, 33, 37, 41, 46
28	41
31	31, 37, 41

'177 Patent Asserted Claim	Obviousness References
1	10, 14, 15, 37
6	10, 14, 15, 26, 33, 37
7	10, 14, 15, 33, 37
9	10, 14, 15, 33, 37

'177 Patent Asserted Claim	Obviousness References
10	10, 14, 15, 33, 37
13	10, 14, 15, 33, 37
14	10, 14, 15, 34, 37, 45
15	10, 14, 15, 26, 33, 37
19	10, 14, 15, 17, 21, 25, 26, 33, 34, 37

'660 Patent Asserted Claim	Obviousness References
1	13
16	6
17	2, 4, 6, 11, 16, 17, 19, 21
25	4, 11, 13, 16, 19, 27, 36
33	6, 17, 19, 21
34	6, 17, 19, 21

'974 Patent Asserted Claim	Obviousness References
1	17, 21, 34, 39
3	17, 21, 34, 39
4	17, 21, 34, 39
5	17, 21, 34, 39
7	17, 21, 34, 39
8	17, 21, 34, 39, 42
9	17, 21, 34, 39
13	17, 21, 34, 39

‘370 Patent Asserted Claim	Obviousness References
1	32, 37, 38
4	32, 37, 38
8	17, 21, 30, 32, 37, 38, 42
13	32, 37, 38, 43
29	32, 37, 38
47	32, 37, 38, 43

‘816 Patent Asserted Claim	Obviousness References
4	3, 17, 21, 34, 44

VI. P.R. 3-3(d): Invalidity Under 35 U.S.C. § 112

Pursuant to P.R. 3-3(d) and the Court's Order, Defendants identify below the grounds upon which certain asserted claims of the Patents-In-Suit are invalid under 35 U.S.C. § 112. Certain asserted claims of the Patents-In-Suit fail to meet the requirements of 35 U.S.C. § 112, ¶ 2 and 35 U.S.C. § 112, ¶ 1 for at least the following reasons.

A. Indefiniteness Under 35 U.S.C. § 112, ¶ 2

Each of the following claims are invalid for failure to comply with the definiteness requirement of 35 U.S.C. § 112, ¶ 2 which states that the claims must “particularly point[] out and distinctly claim[] the subject matter which the inventor [] regards as [the] invention”:

- claims 1, 2, and 4 of the ‘547 patent;
- claims 1, 4-6, 16, 22, 23, 27, 28, and 31 of the ‘194 patent;
- claims 1, 6, 7, 9, 10, 13-15, and 19 of the ‘177 patent;
- claims 1, 3, 10, 16, 17, 25, 33, and 34 of the ‘660 patent;

- claims 1, 3-5, 7-9, and 13 of the '974 patent;
- claims 1, 4, 8, 13, 29, and 47 of the '370 patent; and
- claims 1, 3, and 4 of the '816 patent.

These claims include limitations, quoted below, that have a meaning which cannot be clearly and definitely determined, and the patents thus fail to put the public on notice of what is and is not covered by these claims. The following contentions shall not be deemed as admissions, whether express or implied, regarding the scope of any claims, the proper constructions of those claims or any terms recited in those claims. In addition, to the extent any of the claims discussed below are addressed in the invalidity charts or contentions above, Defendants have not waived the arguments herein, and have merely addressed those claims in the event they are not held invalid.

a. “deformities”

Each and every asserted claim of the '547, '194, '660, '974, '370, and '816 patents and claim 14 of the '177 patent fail to satisfy the requirements of 35 U.S.C. § 112, ¶ 2 because the term “deformities” is indefinite in the context of the claims. “Deformity” is not a term of art in physics or optics, and instead is used in the patents as a functional term. The patent specification states: “the term deformities or disruptions are used interchangeably to mean *any* change in the shape or geometry of the panel surface and/or coating or surface treatment that causes a portion of the light to be emitted.” *See, e.g.*, '547 patent, Col. 4, lines 42-45, '194 patent, Col. 4, lines 44-47; '177 patent, Col. 4, lines 44-47; '660 patent, Col. 4, lines 36-40; '974 patent, Col. 4, lines 36-40; '370 patent, Col. 4, lines 36-40; '816 patent, Col. 4, lines 43-47 (emphasis added). The patents purport to claim *any* size, shape, and placement of “deformities” that result in the desired light output without explaining how such a “deformity” can accomplish the claimed function. Accordingly, the term “deformity” is indefinite because the term is insolvably ambiguous and one of ordinary skill in the art would not understand what “deformities” means in the context of the claims.

b. “pattern of light extracting deformities”

Claims 1, 7 and 13 of the ‘974 patent, claims 1, 13, 29 and 47 of the ’370 patent, and claim 1 of the ‘816, as well as all claims depending from them, patent fail to satisfy the requirements of 35 U.S.C. § 112 because the meaning of the limitation “pattern of light extracting deformities” is indefinite. For example, the specification fails to explain what is necessary to make a “pattern” of light extracting deformities as opposed to a group of deformities which does not constitute a pattern.

c. “well defined”

Claims 1 and 16 of the ‘194 patent fails to satisfy the requirements of 35 U.S.C. § 112, ¶ 2 because the limitation “at least one of the reflective or refractive surfaces has well defined optical elements or deformities” is indefinite. For example, the specification fails to explain what is required to make an optical element or a deformity “well defined” versus poorly defined or any other type of definition. The Examiner in related action Application No. 12/946,077 also determined that “deformities having a well-defined shape” was indefinite because the term “well-defined” is indefinite. *See* March 29, 2012 Office Action in Application Ser. No. 12/946,077 at page 2.

Claim 4 of the ‘194 patent depend from claim 1 of the ‘194 patent and therefore also is indefinite for the same reason. Claims 5 and 6 of the ‘194 patent depend from claim 4 of the ‘194 patent and, therefore, also are indefinite for the same reasons. Claims 22 and 23 of the ‘194 patent depend from claim 16 of the ‘194 patent and therefore also are indefinite for the same reasons. Claim 27 of the ‘194 patent depends from claim 23 of the ‘194 patent and therefore also is indefinite for the same reasons.

Additionally, Claim 28 of the ‘194 patent fails to satisfy the requirements of 35 U.S.C. § 112, ¶ 2 because the limitation “a plurality of optical elements or deformities of well defined shape on or in the top and bottom surfaces” is indefinite. For example, as explained above in this section, the specification fails to explain what is required to make an optical element or a deformity “well defined.”

Claim 31 of the '194 patent fails to satisfy the requirements of 35 U.S.C. § 112, ¶ 2 because the meaning of the limitation "one or more reflective or refractive surfaces that are well defined optical elements or deformities" is indefinite. For example, as explained above in this section, the specification fails to explain what is required to make an optical element or a deformity "well defined."

d. "low loss"

Claims 1, 16, and 28 of the '194 patent also fail to satisfy the requirements of 35 U.S.C. § 112, ¶ 2 because the meaning of the limitation "some of light is redirected to pass through a liquid crystal display with low loss" is indefinite. For example, the specification fails to explain how efficient the light emitting panel must be so that the loss of light passing through the liquid crystal display is "low." That is, there is no disclosure as to how much loss would constitute low loss as opposed to "high loss," or "medium loss," or other amount of loss.

Claim 4 of the '194 patent depend from claim 1 of the '194 patent and therefore also is indefinite for the same reason. Claims 5 and 6 of the '194 patent depend from claim 4 of the '194 patent and, therefore, also are indefinite for the same reasons. Claims 22 and 23 of the '194 patent depend from claim 16 of the '194 patent and therefore also are indefinite for the same reasons. Claim 27 of the '194 patent depends from claim 23 of the '194 patent and therefore also is indefinite for the same reasons.

Claim 1 of the '547 patent also fails to satisfy the requirements of 35 U.S.C. § 112, ¶ 2 because the meaning of the limitation "such that the light will pass through a liquid crystal display with low loss" is indefinite. For example, the specification fails to explain how efficient the light emitting panel must be so that the loss of light passing through the liquid crystal display is "low." That is, there is no disclosure as to how much loss would constitute low loss as opposed to "high loss" or "medium loss."

Claims 2 and 4 of the '547 patent depend from claim 1 of the '547 patent and therefore also are indefinite for the same reason.

Claims 1 and 29 of the '370 patent fail to satisfy the requirements of 35 U.S.C. § 112, ¶ 2 because the meaning of the limitation "such that the light will pass through a liquid crystal display with low loss" is indefinite. For example, the specification fails to explain how efficient the light emitting panel must be so that the loss of light passing through the liquid crystal display is "low." That is, there is no disclosure as to how much loss would constitute low loss as opposed to "high loss" or "medium loss."

Claims 4 and 8 of the '370 patent depend from claim 1 of the '370 patent and therefore also are indefinite for the same reasons.

e. "quite small"

Claim 1 of the '547 patent fails to satisfy the requirements of 35 U.S.C. § 112, ¶ 2 because the meaning of the limitation "having a width and length that is quite small in relation to the width and length of the sheet or film" is indefinite. For example, the specification fails to explain what is required to make a width and length "quite small" as opposed to simply "small" or "not very small" or any other relative size. The Examiner in related action Application No. 12/946,077 also determined that "being quite small in relation to a length and a width of the panel" was indefinite because the term "quite small" is indefinite. *See* March 29, 2012 Office Action in Application Ser. No. 12/946,077 at page 2.

Claims 2 and 4 of the '547 patent depend from claim 1 of the '547 patent and therefore also are indefinite for the same reason.

f. "predetermined"

Claim 1 of the '177 patent, claims 1 and 33 of the '660 patent, and claims 1, 13, 29 and 47 of the '370 patent fail to satisfy the requirements of 35 U.S.C. § 112, ¶ 2 because the meaning of the limitations "[the tray] has one or more secondary flat, angled, faceted or curved reflective or refractive surfaces to redirect at least a portion of the light emitted by the light source in a predetermined manner within the cavity or recess" '177 patent Col. 9, lines 30-32; "the optical conductor having at least one output region and a predetermined pattern of deformities configured to cause light to be emitted from the output region" '660

patent, Col. 9, lines 19-20, Col. 11, lines 7-8; “the panel member having front and back sides and a greater cross sectional width than thickness, both the front and back sides having a pattern of light extracting deformities that are projections or depressions on or in the sides to cause light to be emitted from the panel member in a predetermined output distribution” ’370 patent, Col. 9, lines 12-17, 55-60, Col. 11, lines 6-13, and Col. 12, lines 20-27, are indefinite. For example, the specification fails to explain what “predetermined” is or how far in advance something must be determined to be predetermined. This term lacks any description in the specification other than its functional results. Accordingly, the limitation is indefinite.

Claims 6, 7, 9, 10, 13 and 14 of the ’177 patent depend from claim 1 of the ’177 patent, claims 3, 10, 16, 17 and 34 of the ’660 patent are dependent on claims 1 and 33 of the ’660 patent, and claims 4 and 8 of the ’370 patent depend from claim 1 of the ’370 patent and therefore also are indefinite for the same reasons.

g. “in close proximity”

Claim 7 of the ’177 patent fails to satisfy the requirements of 35 U.S.C. § 112, ¶ 2 because the meaning of the limitation “each light source is positioned in close proximity to a group of the refractive or reflective surfaces” is indefinite. For example, the specification fails to explain what distance is required between a light source and a group of refractive or reflective surfaces to make them “in close proximity” versus what would be in regular or distant proximity. Accordingly, the limitation is indefinite.

h. “a particular application”

Claims 1 and 15 of the ’177 patent fails to satisfy the requirements of 35 U.S.C. § 112, ¶ 2 because the meaning of the limitation “for controlling the light emitted from the assembly to fit a particular application” is indefinite. Claims 6, 7, 9, 10, 13 and 14 of the ’177 patent, which depends from claim 1, is indefinite for the same reason. Claim 19 of the ’177 patent, which depends from claim 15, is indefinite for the same reason.

For example, all of the asserted claims of the '177 require the claimed “at least one sheet, film or substrate” to be *fit* for *a particular application*. The claims, however, provide no indication of the claimed “particular application,” and moreover, do not describe what would make the “at least on sheet, film, or substrate” fit for such application. If the “particular application” can be any application in the world (or universe) the claims are indefinite because they require competitors to have knowledge of something that cannot be known (every possible application). Moreover, even if one could know all of the possible applications, the claims would still be indefinite because “infringement” would depend on the subjective mindset of the accused infringer, i.e., how “fit” the element is for a “particular application” of all of the possible applications that the accused infringer actually had in mind when designing the accused layout. By containing this subjective component, the claims are rendered indefinite. See, e.g., *Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1350 (Fed. Cir. 2005) (“Some objective standard must be provided in order to allow the public to determine the scope of the invention.”)

Similarly, claim 14 of the '177 patent fails to satisfy the requirements of 35 U.S.C. § 112, ¶ 2 because the meaning of the limitation “for controlling the light output ray angle distribution to fit a particular application” is indefinite.

Similarly, claim 5 of the '974 patent fails to satisfy the requirements of 35 U.S.C. § 112, ¶ 2 because the meaning of the limitation “for changing the output ray angle distribution of the emitted light to fit a particular application” is indefinite.

Similarly, claim 31 of the '194 patent fails to satisfy the requirements of 35 U.S.C. § 112, ¶ 2 because the meaning of the limitation “for controlling the light output ray angle distribution of the light emitted to suit a particular application” is indefinite.

i. “a desired light output”

Claim 15 of the '177 patent fails to satisfy the requirements of 35 U.S.C. § 112, ¶ 2 because the meaning of the limitation “to produce a desired light output color or uniformity” is indefinite. For example, it is not clear what a “desired” light output would be versus an

output distribution that is not desired. Claim 19 of the '177 patent, which depends from claim 15, is indefinite for the same reason.

Claim 1 of the '547 patent fails to satisfy the requirements of 35 U.S.C. § 112, ¶ 2 because the meaning of the limitation “a desired light output distribution such that the light will pass through a liquid crystal display with low loss” is indefinite. For example, it is not clear what a “desired” light output would be versus an output distribution that is not desired. Claims 2 and 4 of the '547 patent, which depends from claim 1, are indefinite for the same reason.

Claim 23 of the '194 patent fails to satisfy the requirements of 35 U.S.C. § 112, ¶ 2 because the meaning of the limitation “a desired light output distribution or effect” is indefinite. For example, it is not clear what a “desired” light output distribution would be versus an output distribution that is not desired. Claim 27 of the '194 patent, which depends from claim 23, is indefinite for the same reason.

j. “greater cross-sectional width than thickness”

Claims 1 and 33 of the '660 patent fail to satisfy the requirements of 35 U.S.C. § 112, ¶ 2 because the meaning of the limitation “at least one input edge with a greater cross-sectional width than thickness” is indefinite. For example, the specification fails to explain what is meant by an input edge with a “greater cross-sectional width than thickness”. An “input edge” is presumably a one-dimensional line or a two-dimensional plane, neither of which can have a “thickness” as claimed in the '660 patent. Moreover, if the “input edge” is a two-dimensional plane, the specification fails to identify which planar-axis is considered to be the “width”.

Claims 3, 10, 16,17, and 27 of the '660 patent depend from claim 1 of the '660 patent and therefore also are indefinite for the same reasons. Claim 34 of the '660 patent depends from claim 33 of the '660 patent and therefore also is indefinite for the same reasons.

k. Other Issues

To the extent that one or more of the following claims are found to include means-plus-function limitations subject to the requirements of 35 U.S.C. § 112, ¶ 6, they are invalid for failure to comply with the definiteness requirement of 35 U.S.C. § 112, ¶ 2 because the specification of the respective patents-in-suit fails to disclose any corresponding structure, material, or acts described that perform the recited function:

- claims 1, 2 and 4 of the ‘547 patent;
- claims 1, 3, 10, 16, 17, 25, 33, and 34 of the ‘660 patent;
- claims 1, 3, 4, 5, 7, 8, 9, and 13 of the ‘974 patent;
- claims 1, 4, 8, 9, 13, 29, and 47 of the ‘370 patent; and
- claims 1, 3, and 4 of the ‘816 patent.

Specifically, there is no corresponding structure, material, or acts described in the specification that perform the recited function for the following limitations:

- “the deformities varying at different locations on the sheet or film to direct the light that is emitted by the light emitting member in different directions to produce a desired light output distribution such that the light will pass through a liquid crystal display with low loss” (547 patent, claim 1);
- “a predetermined pattern of deformities configured to cause light to be emitted from the output region” (‘660 patent, claims 1 and 33);
- “the panel member has a pattern of light extracting deformities on or in at least one surface to cause light to be emitted from the light emitting surface of the panel member” (‘974 patent, claims 1, 7, and 13; ‘816 patent claim 1);
- “both the front and back sides having a pattern of light extracting deformities that are projections or depressions on or in the sides to cause light to be emitted from the panel member in a predetermined output distribution” (‘370 patent, claims 1, 13, 29, and 47).

B. Lack of Written Description and/or Lack of Enablement Under 35 U.S.C. § 112, ¶ 1

Each of the following claims are invalid for failure to comply with the written description requirement of 35 U.S.C. § 112, ¶ 1 because the patents do not describe the limitations of the noted claims in sufficient detail that a person of ordinary skill in the art would recognize that the inventor possessed the full scope of the invention as later claimed at the time of filing, and are also invalid for failure to comply with the enablement requirement of 35 U.S.C. § 112, ¶ 1 because the patents do not disclose sufficient information to enable or teach one skilled in the field of the invention to make and use the full scope of the claimed invention without undue experimentation:

- claims 1, 2, and 4 of the '547 patent;
- claims 1, 4-6, 16, 22, 23, 27 and 28 of the '194 patent;
- claims 1, 6, 7, 9, 10, 13-15, and 19 of the '177 patent;
- claims 1, 3, 10, 16, 17, 25, 33, and 34 of the '660 patent; and
- claims 1, 4, 8, 13, 29, and 47 of the '370 patent.

Defendants set forth the following invalidity contentions with respect to the invalidity of the Patents-In-Suit for failure to comply with 35 U.S.C. § 112, ¶ 1. The following contentions shall not be deemed as admissions, whether express or implied, regarding the scope of any claims, the proper constructions of those claims or any terms recited in those claims. In addition, to the extent any of the claims discussed below are addressed in the invalidity charts or contentions above, Defendants have not waived the arguments herein, and have merely analyzed those claims in the event they are not held invalid.

To comply with the enablement requirement of 35 U.S.C. § 112, ¶ 1, the patent must enable the full scope of the claimed invention. Defendants expressly reserve the right to assert the lack of enablement as to any claim or claim limitation the scope and meaning of which is insolubly ambiguous, as in those claims and claim limitations identified above in

section IV(A), or as to any claim or claim limitation as to which Plaintiff proposes a construction that would, if accepted, expand the scope of the claim beyond the enabling disclosure of the specification.

a. “close proximity”

Claim 7 of the '177 patent is invalid because the specification does not describe or enable “close proximity.” The disclosure does not teach what spacing is required for each light source to be positioned in “close proximity” to a group of the refractive or reflective surfaces. Thus, claim 7 is invalid for failure to adequately describe the claimed invention, and for failure to enable a person of skill in the art to practice the claimed invention.

b. “predetermined”

Claim 1 of the '177 patent, claims 1 and 33 of the '660 patent and claims 1, 13, 29 and 47 of the '370 patent are invalid because the specifications do not describe or enable at least a portion of the light emitted by the light source to be redirect in a “predetermined” manner, an optical conductor having a “predetermined” pattern of deformities configured, or light to be emitted from the panel member in a “predetermined” output distribution. See, e.g., '177 patent Col. 9, lines 30-32; '660 patent, Col. 9, lines 19-20, Col. 11, lines 7-8; '370 patent, Col. 9, lines 12-17, 55-60, Col. 11, lines 6-13, and Col. 12, lines 20-27. The specifications mentions “predetermined,” but do not describe it: “one or more light sources 3 which emit light in a predetermined pattern in a light transition member or area.” See, e.g., '177 patent, Cols. 2-3, lines 67-2; '660 patent, Cols. 2-3, lines 62-64; '370 patent, Col. 2, lines 61-63. “[T]he light output will be more efficient if the deformities 21 cause the light rays to emit from the panels at predetermined ray angles such that they will pass through the liquid crystal display with low loss.” See, e.g., '177 patent, Col. 5, lines 28-32; '660 patent, Col. 5, lines 20-23; '660 patent, Col. 5, lines 20-23. “These secondary reflective/refractive surfaces 38 may be flat, angled, faceted or curved, and may be used to extract a portion of the light away from the panel member in a predetermined pattern.” See, e.g., '177 patent,

Col. 7, lines 7-12; '660 patent, Cols. 6-7, lines 63-1; '660 patent, Col. 6-7, lines 63-1. “[A] curved reflective or refractive surface 58 on the transition area 57 and/or wall of the cavity or recess 56 to redirect a portion of the light in a predetermined manner.” See, e.g., '177 patent, Col. 7, lines 53-58; '660 patent, Col. 7, lines 42-45; '660 patent, Col. 7, lines 42-45. Accordingly, claim 1 of the '177 patent, claims 1 and 33 of the '660 patent and claims 1, 13, 29 and 47 of the '370 patent are invalid because they do not adequately describe the claimed invention, and do not enable a person of skill in the art to redirect light in a “predetermined” manner, configure a “predetermined” pattern of deformities, or emit light in a “predetermined” manner without undue experimentation. For example, the specification does not describe how long in advance or how precise the redirection must be in order to be considered predetermined, and one of skill in the art would not be able to implement the claimed invention without undue experimentation.

Claims 6, 7, 9, 10, 13 and 14 of the '177 patent depend from claim 1 of the '177 patent, claims 3, 10, 16, 17, and 25 of the '660 patent depend from claim 1 of the '660 patent, claim 34 of the '660 patent depends from claim 33 of the '660 patent, and claims 4 and 8 of the '370 patent depend from claim 1 of the '370 patent and therefore also are invalid for the same reasons.

c. “both the front and back sides having a pattern of light extracting deformities that are projections or depressions on or in the sides to cause light to be emitted from the panel member in a predetermined output distribution”

Claims 1, 13, 29 and 47 of the '370 patent are limited to a panel member with “both the front and back sides having a pattern of light extracting deformities that are projections or depressions on or in the sides to cause light to be emitted from the panel member in a predetermined output distribution.” The specification of the '370 patent does not address how the “pattern of light extracting deformities” causes light to be emitted “in a predetermined output distribution.” The specification speaks, at most, in vague generalities suggesting that the deformities can be changed to change the light output distribution, but

not how any changes relate to the light output distribution. See, e.g., ‘370 patent at col. 5, lines 1-22; col. 6, lines 11-14. The specification says nothing whatsoever about the relationship between the characteristics of the deformities, or their pattern, and any particular “output distribution,” predetermined or otherwise. To make or use the claimed invention, a person of ordinary skill in the art would be forced to engage in undue experimentation to determine the relationship between the characteristics of the deformities and their pattern on one hand and the emission of light from the panel “in a predetermined output distribution” on the other. For at least these reasons, claims 1, 13, 29 and 47 of the ‘370 patent, as well as dependent claims 4 and 8 are invalid for failure to meet the written description and enablement requirements of 35 U.S.C. § 112, ¶ 1.

d. “at least one secondary flat, angled, faceted or curved reflective or refractive surface to facilitate better mixing of light rays within the cavity or recess to produce a desired light output color or uniformity”

Claim 15 of the ‘177 patent requires that the claimed tray have “at least one secondary flat, angled, faceted or curved reflective or refractive surface to facilitate better mixing of light rays within the cavity or recess to produce a desired light output color or uniformity.” The patent discloses that the tray may have secondary reflective or refractive surfaces, but does not in any way relate these to “a desired light output color or uniformity.” For at least these reasons, claim 15, as well as dependent claim 19, of the ‘177 patent are invalid for failure to meet the written description and enablement requirements of 35 U.S.C. § 112, ¶ 1.

e. “at least some of the light extracting deformities on or in one of the sides are of a different type than the light extracting deformities on or in the other side of the panel member”

The ‘370 patent does not describe “at least some of the light extracting deformities on or in one of the sides are of a different type than the light extracting deformities on or in the other side of the panel member.” The ‘370 patent’s specification does not discuss this

limitation. The first time the '370 patent refers to “at least some of the light extracting deformities on or in one of the sides are of a different type than the light extracting deformities on or in the other side of the panel member” is in the abstract and claims 1 and 13. Lacking any description of “at least some of the light extracting deformities on or in one of the sides are of a different type than the light extracting deformities on or in the other side of the panel member,” claims 1 and 13 are invalid because the patent does not show the inventor was in possession of the claimed invention.

Claims 4 and 8 depend from claim 1 of the '370 patent and therefore also are invalid for the same reasons.

f. “at least some of the light extracting deformities on or in one of the sides vary in a different way or manner than the light extracting deformities on or in the other side of the panel member”

The '370 patent does not describe “at least some of the light extracting deformities on or in one of the sides vary in a different way or manner than the light extracting deformities on or in the other side of the panel member.” The '370 patent's specification does not discuss this limitation. The first time the '370 patent refers to “at least some of the light extracting deformities on or in one of the sides are of a different type than the light extracting deformities on or in the other side of the panel member” is in the abstract and claims 29 and 47. Lacking any description of “at least some of the light extracting deformities on or in one of the sides vary in a different way or manner than the light extracting deformities on or in the other side of the panel member,” claims 29 and 47 are invalid because the patent does not show that the inventor had possession of the claimed invention.

g. “configured to generate light having an output distribution defined by a greater width component than height component”

The '660 patent does not describe or enable “configured to generate light having an output distribution defined by a greater width component than height component.” The '660

patent's specification do not discuss this limitation. The first time the '660 patent refers to "configured to generate light having an output distribution defined by a greater width component than height component" is in claims 1 and 33. The specification does not disclose how either a plurality of light sources (claim 1) or each light source (claim 33) is configured to obtain the claimed output distribution. To make or use the claimed invention, a person of ordinary skill in the art would be forced to engage in undue experimentation to determine the relationship between the configuration of each light source, and "generat[ing] light having an output distribution defined by a greater width component than height component." Lacking any description of "configured to generate light having an output distribution defined by a greater width component than height component," claims 1 and 33 are invalid because the patent does not adequately describe the claimed invention, and does not enable "configured to generate light having an output distribution defined by a greater width component than height component."

Claims 3, 10, 16, 17, and 25 depend from claim 1 of the '660 patent and therefore are also invalid for the same reasons.

h. "low loss"

The '194 patent does not describe or enable "some of light is redirected to pass through a liquid crystal display with low loss". For example, the specification fails to provide examples of patterns of deformities that provide "low loss" or examples of the efficiency of light emitting panels created by the inventor. There is no disclosure as to how much loss would constitute low loss as opposed to "high loss," or "medium loss," or other amount of loss, or disclosure of embodiments that would satisfy the "low loss" claim limitation. Further claims 1 and 16 of the '194 patent specify that there is a causal, functional relationship between the the "well defined optical elements or deformities" and the light "pass[ing] through a liquid crystal display with low loss," while claim 28 specifies a causal, functional relationship between the reflective or refractive surfaces of the optical

elements or deformities and the light “pass[ing] through a liquid crystal display with low loss.” The specification contains only a single only reference to light passing “through the liquid crystal display with low loss.” ‘194 patent, col. 5, lines 27-32. Nothing in that passage or anywhere else in the ‘194 patent specification indicates how the well defined optical elements or deformities, or the reflective or refractive surfaces, may be used “to control[] the emitted light such that at least some of the light is redirected to pass through a liquid crystal display with low loss.” To make or use the claimed invention, a person of ordinary skill in the art would be forced to engage in undue experimentation to determine the relationship between well defined optical elements or deformities, or the reflective or refractive surfaces, and causing the light “to pass through a liquid crystal display with low loss.” Claims 1, 16, and 28 are invalid because the patent does not adequately describe the claimed invention, and does not enable “some of light is redirected to pass through a liquid crystal display with low loss”.

Claim 4 of the ‘194 patent depends from claim 1 of the ‘194 patent and therefore also is invalid for the same reasons. Claims 5 and 6 of the ‘194 patent depend from claim 4 of the ‘194 patent and, therefore, also are invalid for the same reasons. Claims 22 and 23 of the ‘194 patent depend from claim 16 of the ‘194 patent and therefore also are invalid for the same reasons. Claim 27 of the ‘194 patent depends from claim 23 of the ‘194 patent and therefore also is invalid for the same reasons.

The ‘547 patent also does not describe or enable “such that the light will pass through a liquid crystal display with low loss.” For example, the specification fails to provide examples of patterns of deformities that provide “low loss” or examples of the efficiency of light emitting panels created by the inventor. There is no disclosure as to how much loss would constitute low loss as opposed to “high loss,” or “medium loss,” or other amount of loss, or disclosure of embodiments that would satisfy the “low loss” claim limitation. Further, claim 1 of the ‘547 patent specifies that there is a causal, functional relationship between the location of the deformities and the light “pass[ing] through a liquid

crystal display with low loss.” Specifically, claim 1 requires, “the deformities varying at different locations on the sheet or film to direct the light that is emitted by the light emitting member in different directions to produce a desired light output distribution such that the light will pass through a liquid crystal display with low loss.” The specification contains only a single only reference to light passing “through the liquid crystal display with low loss.” ‘547 patent, col. 5, lines 29-30. Nothing in that passage or anywhere else in the ‘547 patent specification indicates how the location of the deformities may be used “to direct the light that is emitted by the light emitting member in different directions to produce a desired light output distribution such that the light will pass through a liquid crystal display with low loss.” ‘547 patent, claim 1. To make or use the claimed invention, a person of ordinary skill in the art would be forced to engage in undue experimentation to determine the relationship between “the deformities varying at different locations on the sheet or film” and causing “the light [to] pass through a liquid crystal display with low loss.” Claim 1 is invalid because the patent does not adequately describe the claimed invention, and does not enable “such that the light will pass through a liquid crystal display with low loss.”

Claims 2 and 4 of the ‘547 patent depend from claim 1 of the ‘547 patent and therefore also are invalid for the same reason.

The ‘370 patent also does not describe or enable “such that the light will pass through a liquid crystal display with low loss.” For example, the specification fails to provide examples of patterns of deformities that provide “low loss” or examples of the efficiency of light emitting panels created by the inventor. There is no disclosure as to how much loss would constitute low loss as opposed to “high loss,” or “medium loss,” or other amount of loss, or disclosure of embodiments that would satisfy the “low loss” claim limitation. Further, claims 1 and 29 of the ‘370 patent specify that there is a causal, functional relationship between the film, sheet or substrate and the light “pass[ing] through a liquid crystal display with low loss.” Nothing in the ‘370 patent specification indicates any film, sheet or substrate that may be used “to change the output distribution of the light such

that the light will pass through a liquid crystal display with low loss.” To make or use the claimed invention, a person of ordinary skill in the art would be forced to engage in undue experimentation to determine the proper “film, sheet or substrate” and causing “the light [to] pass through a liquid crystal display with low loss.” Claims 1 and 29 are invalid because the patent does not adequately describe the claimed invention, and does not enable “such that the light will pass through a liquid crystal display with low loss.”

Claims 4 and 8 of the ‘370 patent depend from claim 1 of the ‘370 patent and therefore also are indefinite for the same reasons.

VII. Accompanying Document Production

Pursuant to P.R. 3.4(b), Defendants are producing JD0000001-8016, which includes prior art references and corroborating evidence concerning prior art systems that do not appear in the file histories of the Patents-in-Suit, to the extent such evidence is available to Defendants at this time. For certain foreign references, Defendants have obtained machine translations to give Plaintiff fair notice of the art, but Defendants reserve the right to later supplement these contentions to rely on further content from certified translations of those same references. These prior art references and corroborating evidence are cited in and support the accompanying invalidity claim charts, and are evidence of the state of the art at the time of the purported inventions.

Defendants’ search for prior art references, additional documentation, and/or corroborating evidence concerning prior art systems is ongoing. Accordingly, Defendants reserve the right to continue to supplement their production as Defendants obtain additional prior art references, documentation, and/or corroborating evidence concerning invalidity during the course of discovery.

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Respectfully submitted,

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CERTIFICATE OF SERVICE

The undersigned certifies that a true and correct copy of the foregoing document was served on the following attorneys of record via certified mail – return receipt requested, email and FTP on this fourteenth day of February, 2014:

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